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EXAMINER

ZHENG, JACKY X

ART UNIT	PAPER NUMBER
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2625

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/776,363	Applicant(s) WALPUS ET AL.	
	Examiner JACKY X. ZHENG	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on February 2, 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the office action based on a request for continued examination under 37 CFR 1.114 filed on January 15, 2009.
2. **Claims 1 and 21** have been amended.
3. **Claims 12-20** have been cancelled.
4. **Claims 1-11 and 21** are currently pending.
5. The rejection under 35 U.S.C. 112, second paragraph with regard to Claim 21 is withdrawn.

Request for Continued Examination (RCE)

6. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 15, 2009 has been entered.

Specification

7. The disclosure is objected to because of the following informalities: in Specification, paragraph [0024], ll 16-17, it appears to be a typographical error where it discloses, "Thus, for example, **monitor 120** can determine if printer 120 is printing", it should be "**monitor 210**". Applicant is respectfully suggested for checking the remaining of the original disclosure for similar issue. Appropriate correction is required.

Response to Arguments

8. Applicant's arguments filed on January 15, 2009 have been fully considered but they are not persuasive.

9. With regard to Applicant's remarks from 3rd paragraph of pg. 6 to 1st paragraph of pg. 7, Applicant asserts (with regard to the claim objection of claim 1) that "*As is explained in paragraph [0024] of the specification, a monitor may 'determine if printer 120 is printing, stopped, how much stock quantity has been advanced through printer 120, and/or the like'; and "A paper advancement monitor clearly monitors paper advancement"; additionally further stated "...claim 1 would read on a hypothetical monitor that only determines whether a printer is printing or stopped and does not measure paper advancement" and "Claim 21 requires monitoring of paper advancement, and thus claim 21 would not read on that hypothetical monitor..."". Applicant's argument(s) are fully considered, however found to be not persuasive for at least the following reasons.*

a. With regard to Applicant's alleged argument of "*...claim 1 would read on a hypothetical monitor that only determines whether a printer is printing or stopped and does not measure paper advancement "*, Examiner respectfully submits that (i) such a alleged limitation of "*does not measure paper advancement*" relating to "a monitor" being claimed in independent claim 1, has neither been recited as claim limitation(s) explicitly in the claim, nor it is required by instant version of claim language, instead it merely further recites "*wherein the monitor is operable to provide an indication of status associated with the printer...*"; and (ii) as admitted and provided by Applicant (i.e. Pg. 6, 4th paragraph) that, "*.. in paragraph [0024] of the specification, a monitor may*

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'determine if printer 120 is printing, stopped, how much stock quantity has been advanced through printer 120, and/or the like...', thus in consistency of the specification provided by Applicant, "a monitor" may in fact also determine how much stock quantity has been advanced through the printer 120 (or measure the paper measurement).

Therefore, alleged argument of *"a hypothetical monitor that only determines whether a printer is printing or stopped and does not measure paper advancement"* is not percussive for at least the reasons set forth above.

b. With regard to Applicant's second alleged argument of *"Claim 21 requires monitoring of paper advancement, and thus claim 21 would not read on that hypothetical monitor... (i.e. Pg. 6, 4th paragraph)"*, as "a monitor" from independent claim 1 is shown above (in paragraph [0024] of specification as provided by Applicant) as being inclusive of able to determine how much stock quantity has been advanced through printer, and *"paper advancement monitor"* from independent claim 21 is stated by Applicant to requires monitoring of paper advancement, so independent claim 21 will read on claim 1 in accordance with Applicant's remarks; therefore the objection to claim 1 is maintained for at least the reasons of records and ones set forth above, as the only difference between the independent claims 1 and 21 is that claim 21 is recited with a "a paper advancement monitor" and whereas claim 1 is cited with "a monitor". Since the only difference is clearly nominative, rather than substantive, claims 1 and 21 are substantial duplicates of each other as being drawn to the method of substantially identical limitations.

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Therefore, for at least the reasons set forth above, the objection made with regard to claim 1 and 21 is remained proper and therefore maintained for record.

10. With regard to Applicant's remarks on pg. 7, 3rd to 5th paragraphs, regarding the rejection made under 35 U.S.C. §112, first paragraph with regard to Claim 21, Applicant asserts that (i) *"at paragraph [0021] the specification explains that in some cases, the stock quantity is a roll of paper or card stock that is unrolled as it is printed...one dictionary definition of 'stock' is 'paper used for printing'... a paper advancement monitor is a monitor that monitors paper advancement, and is amply described in the specification"; (ii) also alleged "...that exact terms from the specification 'need not be used in haec verba' to satisfy the written description requirement of the first paragraph of 35 U.S.C. 112". Applicant's argument(s) are fully considered, however found to be not persuasive for at least the following reasons.*

a. With regard Applicant's first alleged argument, Examiner respectfully submits that such an argument is not persuasive for at least being inconsistent with Applicant's previous remarks. As indicated by Applicant in 4th paragraph of Pg. 6 from the remarks, indicated by Applicant, (a) *"a monitor"* as claimed in claim 1 is different from *"a paper advancement monitor"* claimed in claim 21, further alleged with no issue of duplicated claims for that reason; and (b) supports for *"a monitor"* claimed in claim 1 is pointed out by Applicant and referred to paragraph [0024] of specification, where it discloses *"a printer monitor 210"*. Therefore, for at least the reasons of Applicant's statement of *"a monitor"* and *"a paper advancement monitor"* being different and merely pointed out that *"a monitor"* is supported by *"a printer monitor 210"* disclosed in paragraph [0024] of

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specification, thus Applicant has failed to pointed to any supports for the claimed limitation of "*a paper advancement monitor*" consistent with remarks stated by Applicant to be different from "*a monitor*" claimed in claim 1 (supported by "a printer monitor 210" disclosed in paragraph [0024]). Therefore, claim 21 is rejected for failing to comply with the written description requirement for at least the claimed limitation "*a paper advancement monitor*", at least until the further clarification from Applicant indicating that "a paper advancement monitor" is indeed being explicitly disclosed and supported in the original disclosure at the time of the application filed, and consistent with previous remarks as being different from "a monitor" claimed in claim 1, in which, illustration of supports should also be different from the one for "a monitor" as disclosed and supported by "a printer monitor 210" in paragraph [0024] and Fig. 2, for consistency.

b. With regard to Applicant's second alleged argument of "...*that exact terms from the specification 'need not be used in haec verba' to satisfy the written description requirement of the first paragraph of 35 U.S.C. 112*", Examiner respectfully submits, in accordance with MPEP § 2111.01 IV (the section is also replicated and provided below),

IV. < APPLICANT MAY BE OWN LEXICOGRAPHER

An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s). See *In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994) (inventor may define specific terms used to describe invention, but must do so "with reasonable clarity, deliberateness, and precision" and, if done, must "set out his uncommon definition in some manner within the patent disclosure" so as to give one of ordinary skill in the art notice of the change" in meaning) (quoting *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88, 21 USPQ2d 1383, 1386 (Fed. Cir. 1992)). Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a "lexicographic vacuum, but in the context of the specification and drawings"). Any special meaning assigned to a term "must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention." *Multiform Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998). See also *Process Control Corp. v.*

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HydReclaim Corp., 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999) and MPEP § 2173.05(a). The specification should also be relied on for more than just explicit lexicography or clear disavowal of claim scope to determine the meaning of a claim term when applicant acts as his or her own lexicographer; the meaning of a particular claim term may be defined by implication, that is, according to the usage of the term in >the< context in the specification. See *Phillips v. AWH Corp.*, *415 F.3d 1303<, 75 USPQ2d 1321 (Fed. Cir. 2005) (*en banc*); and *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1583, 39 USPQ2d 1573, 1577 (Fed. Cir. 1996). Compare *Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1370, 73 USPQ2d 1641, 1646 (Fed. Cir. 2005), where the court held that patentee failed to redefine the ordinary meaning of “about” to mean “exactly” in clear enough terms to justify the counterintuitive definition of “about.” (“When a patentee acts as his own lexicographer in redefining the meaning of particular claim terms away from their ordinary meaning, he must clearly express that intent in the written description.”). See also MPEP § 2173.05(a).

Further, Examiner submits that despite allegedly exact terms from the specification need not to be used in haec verba to satisfy the written description requirement of the first paragraph of 35 U.S.C. 112, however recitations of two or more different terms, such as “a monitor” and “a paper advancement monitor” in the claims, in referencing to a single disclosure of “a printer monitor” in the original disclosure, and with latter remarks of two being different while referencing to the same, will not be considered as being done “*with reasonable clarity, deliberateness and precision*”, and as the original disclosure has not “*set out his uncommon definition in some manner within the patent disclosure so as to give one of ordinary skill in the art notice of the change in meaning*” (quoting *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88, 21 USPQ2d 1383, 1386 (Fed. Cir. 1992)), Applicant’s arguments are respectfully found to be not persuasive.

Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. §112, first paragraph with regard to claim 21 is remained proper and therefore maintained.

11. With regard to Applicant’s remarks from pg. 8 to 2nd paragraph of pg. 10, regarding the rejection made under 35 U.S.C. §102(e) with regard to Claim 1, Applicant asserts that

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(i) “Applicant’s monitor performs a sensing or information gathering function and provides information to the microprocessor based system controller... for example the monitor ‘can determine if printer 120 is printing, stopped how much stock quantity has been advanced through printer 120, and /or the like’ ... (Specification paragraph [0024]) the monitor may include an encoder, which is a piece of hardware attached directly to the printer for sensing motion of part of the printer...” (see 2nd paragraph of pg. 9); (ii) “one definition of the word ‘monitor’ is ‘any of various devices for checking or regulating the performance of machines ... (Webster’s New World Dictionary Third College Edition, 1988, p. 877) ... Hopper’s element 34 is simply a display...” (see 3rd paragraph of pg. 9); “...Applicant’s printer controller is an existing computer, such as an IBM OS 390 computer” (see 1st paragraph of Pg. 10) and (iii) as well as alleged missing of elements in 5th and 6th paragraphs of pg. 9. Applicant’s argument(s) are fully considered, however found to be not persuasive for at least the following reasons.

a. In response to Applicant's arguments [(i)-(iii)], the claims are interpreted in light of the specification, however limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant is reminded that in order for such limitations to be considered, respectfully suggest the claim languages to *specifically* recite such limitations (as quoted above, i.e. the specific definition of “monitor”, hardware included in the monitor, etc.) into the independent claim, otherwise *broadest reasonable* interpretations of the broadly claimed limitations are deemed to be proper, as required by MPEP § 2111.

b. In response to argument (ii), Examiner respectfully submits, IEEE 100-*The Authoritative Dictionary of IEEE Standards Terms* (Seventh Edition, 2000, pg. 707),

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provides a definition of monitor, “**monitor**: *(among others)* (4) (B) a generic term referring to **any kind of display device**”.

c. Additionally, in claim 1, currently recites the claim limitation of “*wherein the monitor is operable to provide an indication of status associated with the printer to ...*”. Applicant is respectfully reminded with what is set forth in MPEP 2106 C, which states, “*Language that suggest or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation*”. (an identical issue is also found in independent claim 21) Thus, Applicant is respectfully suggested in amending the claim languages with such an issue in view of the section of MPEP indicated above.

Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. §102(e) over Hopper et al. with regard to claim 1 is remained proper and therefore maintained.

12. With regard to Applicant’s remarks from pg. 11 to 12, regarding the rejection made under 35 U.S.C. §102(e) with regard to Claims 2, 4, 9, 10 and 21. Applicant’s argument(s) are fully considered, however found to be not persuasive for at least the following reasons of record set forth previously and/or the ones further discussed in the section of prior art rejections.

Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. §102(e) over Hopper et al. with regard to claims 1, 21 and corresponding dependent claims are remained proper and therefore maintained.

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(The grounds of rejection and/or objection are maintained for at least the responses set forth above, reasons of record set forth previously, and also replicated and provided in below.)

Claim Objections

13. **Claim 1** is objected to under 37 CFR 1.75 as being a substantial duplicate of newly added claim 21. The only difference between the independent claims 1 and 21 is that claim 21 is recited with a “a paper advancement monitor” and whereas claim 1 is cited with “a monitor”. Since the only difference is clearly nominative, rather than substantive, claims 1 and 21 are substantial duplicates of each other as being drawn to the method of substantially identical limitations. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k) (also see Paragraph 9 of “Response to Arguments” above).

Claim Rejections - 35 USC § 112

14. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

15. **Claim 21** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

16. Claim 21 is *newly* added and recited with limitations of “*a paper advancement monitor*”, Applicant has not pointed out where the new claim is supported, nor does there appear to be a written description of the claim limitation “*a paper advancement monitor*” in the application as

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filed. Therefore, claim 21 is rejected for failing to comply with the written description requirement, at least until the further clarification from Applicant indicating that such limitations are indeed being *explicitly* disclosed in the original disclosure at the time of the application filed. (also see Paragraph 10 of “Response to Arguments” above).

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18. **Claims 1-11 and 21** are rejected under 35 U.S.C. 102(e) as being anticipated by **Hopper et al.** (U.S. Patent No. 7,061,391).

With regard to claim 1, the claim is drawn to a retrofitted printing system including an existing printer and printer controller combination, the retrofitted printing system comprising: a monitor coupled to the printer (*see Hopper et al., i.e. Figure 1, Part 34, "Monitor"; column 3, lines 27-28, "printer status window 32 displayed within a monitor 34"*); and a microprocessor based system controller (*see Hopper et al., Fig. 1, Part 2, "Computer", column 3, line 65-67*); wherein the monitor is operable to provide an indication of status associated with the printer (*see Hopper et al., i.e. Figure 1, Part 34, "Monitor"; column 3, lines 27-28, "printer status window 32 displayed within a monitor 34", connected to printers 4a and/or 4b through network 6*) to the microprocessor based system controller (*see Hopper et al., i.e. Figure 1, Part 2, "computer"*);

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column 3, lines 65-67), wherein the microprocessor based system controller is coupled to the monitor (*see Hopper et al., i.e. Fig. 1, Part 2- "Computer" is coupled to Part 34 "Monitor"*) and the printer controller (*see Hopper et al., i.e. Fig. 1, Part 2 "Computer" is coupled to "Printer CPUs 8a and 8b" through network 6*), wherein the microprocessor system controller includes a computer readable medium, and wherein the computer readable medium includes instructions executable by the microprocessor to (*see Hopper et al., i.e. column 3, lines 24-27, "Computer 2 includes a printer monitor program 30 that generates information through a graphical user interface on the amount remaining for recourses.."*): receive an operator command; format the operator command into a command compatible with the printer and printer controller combination; provide the command compatible with the printer and printer controller combination to the printer controller; and receive the indication of status associated with the printer from the monitor (*see Hopper et al., i.e. column 5, lines 13-36, "printer monitor 30" (also known as "printer monitor program 30"); also see Figure 4 and claim 1;*) (also see "Response to Arguments" above).

With regard to claim 2, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 1, wherein the monitor comprises: an encoder, wherein the encoder is coupled to a stock advance mechanism of the printer (*see Hopper et al., i.e. column 3, lines 12-23, different types of sensors, such as: "electromechanical sensor" for paper, "electrical sensor" for toner and etc.*) ; and a monitor controller (*one of ordinary skill in the art will realize that there will inherently be a "controller" (processors or microprocessors of certain types) within the "Monitor" as illustrated in Figure 1, Part 34*), wherein the monitor controller is communicably coupled to the encoder and to the system

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controller, and wherein the monitor controller is operable to format information from the encoder to a format compatible with the system controller (*see Hopper et al., i.e. Figure 1, "Monitor 34" is coupled to "Computer 2" and also coupled to "Resource Sensors 16a, 18a, 20a of Printer 1" (and "Resource Sensors 16b, 18b and 20b" of Printer 2) through "Network" (or through any other types of connection generally known in the art, such as: parallel, serial, USB interfaces, disclosed in Column 3, lines 5-12;).*

With regard to claim 3, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 1, wherein a stock quantity is installed on the printer such that the printer is operable to print on the stock quantity, and wherein the computer readable medium further includes instructions executable by the microprocessor to: determine an actual length of the stock quantity utilized (*see Hopper et al., i.e. column 5, lines 37-67, disclose determination by "printer monitor program 30" the depletion rate per square inch of print coverage based on parameters such as: the number of pages in the print job, the compression ratio, file size, contrast, and boldness of the print job; also Hopper et al., i.e. column 5, lines 37-67, disclose determination by "printer monitor program 30"; specifically column 5, lines 44-47, disclose "The printer monitor 30 determines (at block 132) the number of pages in the print job, the compression ratio ..."; more importantly, in column 5, lines 53-60, discloses "the printer monitor 30 then calls (at block 134) the print coverage function 56 the print coverage function returns the print coverage or number of square inches or printed matter for the entire print job, which may comprise one or more pages of output ...".*

With regard to claim 4, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 3, wherein the operator command

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indicates a start of particular print job, and wherein the computer readable medium further includes instructions executable by the microprocessor to: access the particular print job; and based at least in part on the accessed print job, determining an optimum length of the stock quantity to be used (*see Hopper et al., i.e. column 5, line 37 - column 6, line 34, beside disclosing determination by "printer monitor program 30" the depletion rate per square inch of print coverage based on parameters such as: the number of pages in the print job, the compression ratio, file size, contrast, and boldness of the print job; Hopper et al. further disclose the calculation of "final estimate of the amount of toner that will be depleted (col. 6, line 9)" or "optimum length of the stock quantity to be used"; also see Figure 5;*).

With regard to claim 5, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 4, wherein the computer readable medium further includes instructions executable by the microprocessor to: determine an actual length remaining on the stock quantity used (*see Hopper et al., i.e. Figure 4, Step 110, "Display needle at position in gauge pointing to toner_left value and display amount of toner left and percentage left".*).

With regard to claim 6, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 5, wherein the computer readable medium further includes instructions executable by the microprocessor to: compare the actual length remaining on the stock quantity and the optimum length of the stock quantity to be used (*see Hopper et al., i.e. Figure 5, Step 148, compare "toner_left"(remaining amount) to "toner_used"(amount required for the print job)*).

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With regard to claim 7, the claim is drawn to The retrofitted printing system including an existing printer and printer controller combination of claim 6, wherein the system controller includes a display, and wherein the computer readable medium further includes instructions executable by the microprocessor to: display the actual length remaining on the stock quantity on the display and display the optimum length of the stock quantity to be used on the display (*see Hopper et al.*, i.e. Figure 4, Step 110, "Display needle at position in gauge pointing to toner_left value and display amount of toner left and percentage left"; also Figures 2 and 7;).

With regard to claim 8, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 4, wherein the computer readable medium further includes instructions executable by the microprocessor to: compare the actual length of the stock quantity utilized and the optimum length of the stock quantity to be used (*see Hopper et al.*, i.e. Figure 6, Step 186, compare "pages printed" ("actual") to amount calculated by "page_per_gram" times "max_toner", to determine whether or not within "an acceptable level of error", see also column 7, line 66 - column 7, line 1).

With regard to claim 9, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 8, wherein the computer readable medium further includes instructions executable by the microprocessor to: determine a waste associated with the particular print job (*see Hopper et al.*, i.e. Figure 6, Step 186, compare "pages printed" ("actual") to amount calculated by "page_per_gram" times "max_toner", to determine whether or not within "an acceptable level of error", see also column 7, line 66 - column 7, line 1)..

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With regard to claim 10, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 9, wherein the computer readable medium further includes instructions executable by the microprocessor to: log a status of the particular print job in relation to an operator associated with the particular print job (*see Hopper et al., i.e. Figure 5, Step 130, receiving print job file*); and based at least in part on the status of the particular print job, form a rating of the operator (*see Hopper et al., i.e. Figure 5, Step 160, display toner needle at zero at gauge "or form a rating"*).

With regard to claim 11, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 1, wherein the system controller includes a graphical user interface (*see Hopper et al., i.e. Figure 1, "Computer 2 (or the likes)" connected to "Monitor 34", GUI (such as in Figures 2 and 7) displayed in "Monitor 34"*).

With regard to claim 21, the claim is drawn to a retrofitted printing system including an existing printer and printer controller combination, the retrofitted printing system comprising:

a paper advancement monitor coupled to the printer (*see Hopper et al., i.e. Figure 1, Part 34, "Monitor"; column 3, lines 27-28, "printer status window 32 displayed within a monitor 34"*), wherein the paper advancement monitor is operable to provide, a microprocessor based system controller (*see Hopper et al., Fig. 1, Part 2, "Computer", column 3, line 65-67*) an indication of an amount of paper advanced through the printer (*see Hopper et al., i.e. Figure 1, Part 34, "Monitor"; column 3, lines 27-28, "printer status window 32 displayed within a monitor 34", connected to printers 4a and/or 4b through network 6; Fig. 4, Step 104, discloses "determine page_per_gram from printer coverage table" and Step 112 discloses "display the number of pages left as pages_per_gram times the toner_left value"; Fig. 6, Step 186, discloses*

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determining of "pages printed" and comparing to "page_per_gram" times "max_toner";) to the microprocessor based system controller (see Hopper et al., i.e. Figure 1, Part 2, "computer"; column 3, lines 65-67), wherein the microprocessor based system controller is coupled to the monitor (see Hopper et al., i.e. Fig. 1, Part 2- "Computer" is coupled to Part 34 "Monitor") and the printer controller (see Hopper et al., i.e. Fig. 1, Part 2 "Computer" is coupled to "Printer CPUs 8a and 8b" through network 6), wherein the microprocessor system controller includes a computer readable medium, and wherein the computer readable medium includes instructions executable by the microprocessor to (see Hopper et al., i.e. column 3, lines 24-27, "Computer 2 includes a printer monitor program 30 that generates information through a graphical user interface on the amount remaining for recourses.."): receive an operator command; format the operator command into a command compatible with the printer and printer controller combination; provide the command compatible with the printer and printer controller combination to the printer controller; and receive the indication of status associated with the printer from the monitor (see Hopper et al., i.e. column 5, lines 13-36, "printer monitor 30" (also known as "printer monitor program 30"); also see Figure 4 and claim 1;).

Response to Arguments (in response to remarks dated June 17, 2008)

19. Applicant's arguments filed on **June 17, 2008** have been fully considered but they are not persuasive for at least the following reasons.

20. In re Applicant's remarks from Pg. 9, 3rd Para. to Pg. 10, 2nd Para., regarding the rejection made under 35 U.S.C. §102(e) with regard to Claim 1, Applicant asserts that: a) "... the monitor 34 of Hopper et al. 'attached to the computer 2', and the computer 2 is further 'in

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communication with the printer 4a and 4b over a network 6..., the monitor 34 of Hopper et al. is separated from the printers 4a and 4b by at least the computer 2 and the network 6, hence Hopper et al. fails to teach that the monitor 34 is "coupled to the printer" as recited in claim 1;

b) *"the monitor 34 of Hopper et al. that is attached to a computer 2 appears to be a display device of the computer 2..., the monitor 34 might receive video input from the computer... this is opposite of the monitor of claim 1 that is operable to provide an indication of status associated with the printer to a microprocessor based system controller"; and **c)** "... the monitor 34 of Hopper et al. does not appear to be display screen and does not 'monitor' anything... the monitor of claim 1 is not a traditional 'display screen monitor', but rather a monitor operable to actually transmit status signals based on what is monitored...".* Applicant's argument(s) are fully and carefully considered, however found to be not persuasive for at least the following reasons.

a. With regard to argument a), as admitted and agreed by Applicant ("*Remarks*", i.e. Pg. 9, 5th Para.) that the monitor 34 of Hopper et al. is connected (or coupled) to the printers 4a and 4b, through the computer 2 and network 6. Examiner respectfully submits that the disclosure of Hopper et al. (as also admitted by Applicant) is satisfied on the broadly claimed scope of "a monitor coupled to the printer" as recited in claim 1 for at least the reason that the instant claim language does not further require the monitor claimed to be directly coupled to the printer without any intervention or medium in between. Therefore, the *broadest reasonable interpretation* of such limitation as connecting or coupling the monitor to the printer *indirectly*, such as connecting through

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the computer and/or networks is deemed to be reasonable and proper for one of ordinary skill in the art.

b. With regard to argument b), Examiner respectfully submits that it is irrelevant that whether or not “the monitor 34 might receive video input from the computer” as the claim language of instant claim in argument has not specifically recited or requires any limitations relating to transmission directions of the monitor signals. In order for such specific limitations to be considered in further prosecution, Examiner respectfully suggest in amending and/or adding such claim limitations and also supported by original disclosure. Finally, the specific limitation in argument, “*operable to provide an indication of status associated with the printer to a microprocessor based system controller*”, merely requires to provide indication of status associated with the printer, whereas in Hopper et al., i.e. Fig. 1, Part 34 and col. 3, ln 27-28 (also discussed in previous Office Action), clearly disclose “printer status window 32 displayed within a monitor 34”, which clearly reads on the limitation of “providing an indication of status associated with the printer (or printer status)” on a monitor.

c. With regard to argument c), Examiner respectfully submits that mere allegation of “*the monitor of claim 1 is not a traditional ‘display screen monitor’*” and further asserting the monitor is “... *rather a monitor operable to actually transmit status signals based on what is monitored*” without any supports by instant claim languages is considered to be not persuasive. In addition, Examiner respectfully submits, although the claims are interpreted in light of the specification, however limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.

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1993). Applicant is reminded that in order for such limitations to be considered, the claim languages require to *specifically* recite such limitations in the claim, otherwise *broadest reasonable* interpretations of the broadly claimed limitations are deemed to be proper.

Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. §102 (e) over Hopper et al. with regard to claim 1 is remained proper and therefore maintained for the record.

21. In re Applicant's remarks from Pg. 10, 4th Para. to Pg. 11, 1st Para., regarding the rejection made under 35 U.S.C. §102(e) with regard to Claims 2, Examiner respectfully submits that Applicant's argument(s) are fully and carefully considered, however found to be not persuasive for at least the following reasons.

a. With respect to the argument at the monitor and the printers are separated by at least the computer and the network, Examiner again respectfully submits that the disclosure of Hopper et al. (as also admitted by Applicant) is satisfied on the broadly claimed scope of "a monitor coupled to the printer" as recited in claim 1 for at least the reason that the instant claim language does not further required the monitor claimed to be directly coupled to the printer without any intervention or medium in between.

Therefore, the *broadest reasonable interpretation* of such limitation as connecting or coupling the monitor to the printer *indirectly*, such as connecting through the computer and/or networks is deemed to be reasonable and proper for one of ordinary skill in the art.

b. Further, with respect to the argument that, quotes "*the monitor 34 of Hopper et al. may or may not include a controller, the monitor 34 does not necessarily have to do*

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so. For example, the monitor 34 may be an analog monitor, for example, similar to one of the early television sets with a controller" (see "remarks", Pg. 11, first para.),

Examiner respectfully re-submits that, for one of ordinary skill in the art, a monitor (similar to the one in Hopper et al. "monitor 34") will inherently requires at least one (if not more than just one) processor, microprocessor, microcontroller, or a controller circuitry of certain type, for signal processing. Further, as Applicant has failed to proven the contrary in at least one exception, and instead (Applicant) indicated, *"for example, the monitor 34 may be an analog monitor, for example, similar to one of the early television sets with a controller" ("remarks", first para. of Pg. 11)*, which indicates the further admission in that even one of the early television sets are with a controller. Examiner is also in agreement with Applicant that even one of the early television sets are with a controller.

Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. §102 (e) over Hopper et al. with regard to claim 2 is remained proper and therefore maintained for the record.

22. In re Applicant's remarks from Pg. 11, 2nd – 4th Para., regarding the rejection made under 35 U.S.C. §102(e) with regard to Claim 3, Applicant asserts that previous Office Action has cited passages from Hopper et al. that previous office action cited, "in Hopper et al., col. 6, ln 8-10" and *"produce the final estimate of the amount of toner that will be depleted"* for claim 3.

Examiner respectfully submits that it appears that Applicant has misread the citation from previous office action, and the citation which was pointed out by Applicant appears to the citation for dependent claim 4 (not claim 3); therefore Examiner respectfully submits that such

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arguments are incorrect. Further, reiteration of the claim limitations in claim 3 is provided herein, as Hopper et al., i.e. column 5, lines 37-67, disclose determination by “*printer monitor program 30*”; specifically column 5, lines 44-47, disclose “*The printer monitor 30 determines (at block 132) the number of pages in the print job, the compression ratio ...*”; more importantly, in column 5, lines 53-60, discloses “*the printer monitor 30 then calls (at block 134) the print coverage function 56 the print coverage function returns the print coverage or number of square inches or printed matter for the entire print job, which may comprise one or more pages of output ...*”, which clearly reads on the limitation in argument, “determine an actual length of the stock quantity utilized”. Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. §102 (e) over Hopper et al. with regard to claim 3 is remained proper and therefore maintained for the record, as well as for the corresponding dependent claims as Applicant has not pointed any further deficiency of the rejection.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (Applicant is respectfully suggested to consider at least following prior arts prior to filing of an amendment).

- A. Garr et al. (U.S. Patent No. 5,802,420) disclose a method and apparatus for predicting and displaying toner usage of a printer (i.e. Figure 7).
- B. Tani (U.S. Pub. No. 2002/0059106 A1) discloses a consumable goods and services providing system (i.e. Figures 1, 4 and 5).

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- C. Maruyama et al. (U.S. Pub. No. 2005/0105934 A1) disclose a cartridge recycling information apparatus corresponding method and cartridge to be recycled.
- D. Kotani et al. (U.S. Patent No. 5,216,464) disclose an image forming apparatus having replaceable element which is replaced based on frequency of use (i.e. Figures 2 and 4).
- E. Beard et al. (U.S. Patent No. 6,940,613) disclose a system for managing replaceable modules in a digital print apparatus.
- F. Kahleck et al. (U.S. Patent No. 5,673,190) disclose a multipurpose remote office machine management system.
- G. Lee (U.S. Patent No. 5,708,912) discloses a method and device for displaying an exchange message for a process cartridge with a process cartridge comprising non-volatile memory for storing data values.
- H. Springett (U.S. Patent No. 5,636,032) discloses a system and method for informing a user of a marking material status in a printing environment.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacky X. Zheng whose telephone number is (571) 270-1122. The examiner can *normally* be reached on Monday-Friday, 8:30 a.m. - 5 p.m., Alt. Friday Off.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler L. Haskins can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jacky X. Zheng/

Examiner, Art Unit: 2625

February 3, 2009

/Twyler L. Haskins/

Supervisory Patent Examiner, Art Unit 2625